

WHAT IS CLAIMED IS:

1. A distributed medical diagnostic imaging system, comprising:
 - a system manager generating function commands for at least one function from a set of functions including at least one of system boot, system reset, system shutdown, power failure, and error handling;
 - a subsystem capable of performing at least one function from said set of functions, said subsystem including at least one task operator capable of executing at least one task associated with each function performed by said subsystem; and
 - a subsystem manager receiving said function commands and in response thereto providing task instructions to said task operator concerning said at least one function, said task operator supplying task results regarding completion or failure of each of said task instructions to said subsystem manager, said subsystem manager transmitting function results regarding completion or failure of each of said function commands to said system manager based on said task results.
2. The distributed medical diagnostic imaging system of claim 1, further comprising a plurality of subsystems and an equal plurality of subsystem managers.
3. The distributed medical diagnostic imaging system of claim 1, further comprising a plurality of subsystems connected to said system manager through a common communications channel.
4. The distributed medical diagnostic imaging system of claim 1, wherein said set of functions include at least one level.
5. The distributed medical diagnostic imaging system of claim 1, wherein said set of functions include at least one phase.

6. The distributed medical diagnostic imaging system of claim 1, wherein said system manager and system subsystem manager constitute state machines.

7. The distributed medical diagnostic imaging system of claim 1, wherein, when a failure occurs in a subsystem, said task operator generates data indicative of a level in a function at which said failure occurred.

8. The distributed medical diagnostic imaging system of claim 1, wherein, when a failure occurs in a subsystem, said task operator generates data indicative of a phase in a function at which said failure occurred.

9. The distributed medical diagnostic imaging system of claim 1, wherein, when a failure occurs in a subsystem, said subsystem manager generates data indicative of the subsystem at which said failure occurred.

10. The distributed medical diagnostic imaging system of claim 1, wherein, when a failure occurs in a task operator, said subsystem manager generates data indicative of the task operator at which said failure occurred.

11. A method for managing a distributed medical diagnostic imaging system, said method comprising:

transmitting a function command from a system manager to a subsystem manager for a subsystem; and

relaying said function command from said subsystem manager for said subsystem to a task operator for said subsystem.

12. The method of claim 11, further comprising receiving notification of completion of said function command from said task operator at said subsystem manager.

13. The method of claim 11, further comprising receiving notification of completion of said function command from said subsystem manager at said system manager.

14. The method of claim 11, further comprising receiving an error message from said task operator at said subsystem manager.

15. The method of claim 11, further comprising receiving an error message from said subsystem manager at said system manager.

16. The method of claim 11, further comprising a plurality of subsystems and an equal plurality of subsystem managers.

17. The method of claim 11, further comprising a plurality of task operators.

18. The method of claim 11, wherein said function command comprises at least one of booting, resetting, shutdown, power failure, and error handling.

19. The method of claim 11, wherein said task operator executes at least one task, including at least one of booting, resetting, error handling, and shutting down said subsystem.

20. A method for locating errors in a medical diagnostic imaging system, said method comprising:

distributing control of said medical diagnostic imaging system among a plurality of hierarchical levels, said plurality of hierarchical levels including a top level and a plurality of secondary levels;

transmitting system commands from said top level to said plurality of secondary levels;

flagging an error at least one of said plurality of secondary levels; and

receiving notification at said top level from said plurality of secondary levels, said notification comprising status of said plurality of secondary levels including said error at said at least one of said plurality of secondary levels.

21. A method for distributed management of a medical diagnostic imaging system, said method comprising:

determining components present in said medical diagnostic imaging system to form a hierarchical system configuration;

automatically notifying said system of new components being at least one of added to and removed from said system;

updating said hierarchical system configuration to reflect said new components; and

managing said system based on said hierarchical system configuration.

22. A method for synchronizing a medical diagnostic imaging system during system boot, said method comprising:

initiating transition of at least one medical diagnostic imaging subsystem to a desired state; and

monitoring and coordinating said transition of the at least one medical diagnostic imaging subsystem to the desired state in order to synchronize said medical diagnostic imaging system at the desired state.

23. The method of claim 22, further comprising a plurality of medical diagnostic imaging subsystems in the medical diagnostic imaging system.

24. The method of claim 23, further comprising synchronizing the plurality of medical diagnostic imaging subsystems at the desired state.

25. The method of claim 23, further comprising generating an error signal when one of said plurality medical diagnostic imaging subsystems does not transition to the desired state.